ABSTRACT

A time-domain time-scale modification method based on the synchronous overlap-and-add method consists of a generalization of the envelope-matching time-scale modification method. The cross-correlation function employs n most significant bits rather than merely the sign bit of the prior envelope matching method. This provides higher accuracy for n > 1. A fixed-size cross-correlation buffer is employed to eliminate the need for normalization inside the search loop. This invention makes full use of fast/parallel shift and multiply-and-accumulate (MAC) instructions of current digital signal processors to become at the same time faster and more precise than envelope-matching time-domain time-scale modification.